

**REMARKS**

Claims 1-15, 17 and 23-29 are all the claims pending in the application.

**I. Claims 1-15, 17 and 23-29 Are Patentable Under 35 U.S.C. § 101**

On page 3 of the Office Action, the Office maintained the rejection of claims 1-15, 17 and 23-29 under 35 U.S.C. § 101 because the recited invention allegedly is “not tied to any particular apparatus or machine”. Office Action, page 4.

Applicants respectfully disagree with the Office that the recited invention is patent ineligible under 35 U.S.C. § 101. Applicants reiterate and reapply the arguments set forth in the Amendment dated September 24, 2009. The Examiner’s assertion that Judge Michel’s comments regarding the *Bilski* decision have “no bearing on the examination of process claims as decided by the CAFC and as directed by the instructions recited above” is illogical because Judge Michel authored the *Bilski* decision which gave rise to the guidelines referred to by the Office.

Transformations are recited by the claims, *inter alia*, extractions. *In re Abele*, 684 F.2d 902 (CCPA 1982).

Withdrawal of the rejection is respectfully requested.

**II. Claims 1-15, 17 and 23-29 Are Patentable Under 35 U.S.C. § 103**

On page 5 of the Office Action, the Office maintained the rejection of claims 1-15, 17 and 23-29 under 35 U.S.C. § 103(a) as being unpatentable over Parada, et al. in view of Kiyuna because allegedly it would have been obvious to have used the imaging techniques of Kiyuna with the microscopic evaluation of chromosome territories as taught by Parada, et al.

Applicants respectfully disagree with the Office. As indicated in Applicants' Amendment of September 24, 2009, to support a rejection under 35 U.S.C. §103, the cited references must teach or suggest each and every element of the claim. It is necessary to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some *articulated reasoning* with some *rational underpinning* to support the legal conclusion of obviousness.

The major object of Kiyuna is to extract a cell region. One aspect of the present invention is to estimate a cell state by using the extracted positioning state of a chromosome territory. It is not obvious to obtain information regarding a cell state based on the extracted positioning state of a chromosome territory. To obtain the relevant information, techniques not described in Kiyuna (e.g., setting a reference point for a distance calculation, standardizing the distance, standardizing the form of the cell) are needed. More specifically, Claim 1 recites extracting a cell region but the standardizing and evaluating the chromosome territory are also recited. In Claim 2, standardizing a form of the nucleus and transforming coordinates of the chromosome territory based on a change in form between the nucleus before standardization and the nucleus after standardization are recited. Claim 6 recites a positioning direction of the plurality of chromosome territories. Claim 7 recites a distance between the plurality of chromosome territories. Claim 8 recites calculating a center of gravity of each of the plurality of chromosome territories and calculating a distance between the centers of gravity. Claim

15 recites a direction of a principal axis of the chromosome territory, and a spread of the chromosome territory. Kiyuna fails to teach or suggest standardizing and evaluating a form of the chromosome territory. A person of skill would know that a meaningful evaluating value is not obtained without the standardizing step.

Thus, because essential elements recited by the claims are missing from the references, and because the recited method is not taught or disclosed by Kiyuna, the Office failed to set forth a prima facie case of obviousness.

Withdrawal of the rejection is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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